

**REMARKS/ARGUMENTS**

Applicants respectfully request reconsideration and allowance of this application in view of the amendments above and the following comments.

Purely editorial amendments have been made to the claims. Applicants respectfully submit that these amendments do not require other than a cursory review by the Examiner, and do not introduce new matter. An early notice to that effect is earnestly solicited.

Claim 3 was rejected under 35 USC § 112, second paragraph, as being indefinite in lacking proper antecedent basis for the phrase "the mean particle size." In response, Applicants have made claim 3 depend on claim 2, which recites "a mean particle size."

Claims 1, 2, 5-7, 9, 12 and 13 were rejected under 35 USC § 103(a) as being obvious over Shouheng Sun et al. ("Sun"), Science, 287: 1989 (2000), in view of Bonnemann et al. ("Bonnemann '377"), US 5,308,377.

Claim 10 was rejected under 35 USC § 103(a) as being obvious over Sun in view of Bonnemann '377 and further in view of allegedly admitted prior art in the specification at page 2, lines 5-13.

Claims 3, 4, 8, 11 and 14-18 were rejected under 35 USC § 103(a) as being obvious over Sun in view of Bonnemann '377 and further in view of Bonnemann et al. ("Bonnemann '304"), US 6,531,304.

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In response to **all three** obviousness rejections, Applicants respectfully submit that the cited combinations of references do not make out a *prima facie* case of obviousness and, further, in any case, the present invention is clearly characterized by unexpected results demonstrated by the comparative data in the instant specification, which are, therefore, objective evidence of nonobviousness. In either case, Applicants respectfully request that all three obviousness rejections be reconsidered and withdrawn.

According to the Examiner's theory, Sun discloses a similar process as instantly claimed except the Examiner concedes towards the top of page 3 of the Office Action that Sun does not disclose the use of organometallic compounds of Group 13, as instantly claimed. However, the Examiner finds that such organometallic compounds of Group 13 are taught to be useful in the context of colloid preparation by Bonnemann '377. The Examiner theorizes that a person having ordinary skill in the art would have had motivation to use Bonnemann's organometallic compounds in Sun's process.

Applicants respectfully disagree with the Examiner's position.

First, Applicants agree that Bonnemann '377 does teach the use of organoboron and organogallium complexing agents in the context of colloid synthesis. However, Applicants emphasize that, according to the discussion at column 2, lines 12-35, these complexing agents are reacted with ***metal hydride reducing agents*** in order to help solvate the metal hydrides in the organic solvents used in Bonnemann's synthesis.

Applicants further point out that Sun does ***not*** use metal hydrides in his process and, therefore, there is no reason apparent on the present record why a person having ordinary skill in

the art should employ Bonnemann's complexing agents in Sun's process.

Accordingly, Applicants respectfully submit that the Examiner's proposed combination of references makes no sense from a technical standpoint. As reaffirmed by the Court in *In re Regel et al.*, 188 USPQ 136, 139, footnote 5 (CCPA 1975):

"The mere fact that it is *possible* to find two isolated disclosures which might be combined in such a way to produce a new compound does not necessarily render such production obvious unless the art also contains something to suggest the desirability of the proposed combination."

The Examiner does not give a plausible reason why persons skilled in the art should employ Bonnemann's complexing agent in Sun's process. In the absence of such plausible reason, Applicants respectfully submit that the Examiner has not made out a *prima facie* case of obviousness.

Second, even if such a combination were properly made—which Applicants do not concede—there is nothing in the cited combinations of references that would have led persons skilled in the art to expect that this material is critical to controlling the particle size as Applicants teach in the instant specification at page 4, lines 13-16, and in the instant examples. On page 4, lines 13-16, Applicants teach that the mean particle size is established by the particular alkyl group used and also by the concentration of the organometallic compound. Instant Example 1 versus Comparative Example 7 shows that quite unexpectedly the use of the organometallic compound has the effect of narrowing the size distribution: In Example 1, which uses the organometallic compound, a narrow size distribution is produced, as shown in Figure 2.

In contrast, in Comparative Example 7, which does *not* use the organometallic compound, a broad size distribution results, as shown in Figure 1.

Applicants respectfully submit that there is no teaching or suggestion in either Sun or Bonnemann '377 that the organometallic compound controls particle size distribution. Bonnemann '377 appears to teach at column 3, lines 25-40, that particle size distribution is controlled by reaction parameters, specifically temperature. Sun only appears to teach that size is controlled intentionally by first preparing seed particles and then increasing the size of these seed particles by adding other reagents. See in Sun the first paragraph in the right-hand column on page 1989.

In short, there is nothing in the combination of Sun and Bonnemann '377 or in their further combination with Bonnemann '304 that teaches or suggests the results that Applicants have demonstrated in the instant specification. Accordingly, such results must not only be considered to be surprising, but also unexpected and, thus, as objective evidence of nonobviousness. Although these data are not in declaration form, consistent with the rule that *all* evidence of nonobviousness must be considered when assessing patentability, the Examiner must consider data in the specification in determining whether the claimed invention provides unexpected results. *In re Soni*, 34 USPQ2d 1684, 1687 (Fed. Cir. 1995).

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw all three obviousness rejections. An early notice that all three obviousness rejections have been reconsidered and withdrawn is earnestly solicited.

Applicants believe that the foregoing constitutes a bona fide response to all outstanding

objections and rejections.

Applicants also believe that this application is in condition for immediate allowance. However, should any issue(s) of a minor nature remain, the Examiner is respectfully requested to telephone the undersigned at telephone number (212) 808-0700 so that the issue(s) might be promptly resolved.

Early and favorable action is earnestly solicited.

Respectfully submitted,  
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